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SEPTEMBER, 1920

The University of Rochester

DIVISION OF EXTENSION TEACHING

ANNOUNCEMENT



1920-1921

PUBLISHED BY
THE UNIVERSITY OF ROCHESTER
ROCHESTER, NEW YORK

CALENDAR FOR 1920-1921

FIRST TERM—1920

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| Registration, first term begins | Monday, September 13. |
| Instruction begins | Tuesday, September 21. |
| Registration, first term ends | Thursday, September 30. |
| Mid-term reports | Wednesday, November 17. |
| Thanksgiving recess | Thursday, Friday and Saturday, November 25-27. |
| Christmas recess begins | Wednesday, December 22, at 4:00 P. M. |
| Instruction begins | Monday, January 3. |
| Term examinations | Wednesday, January 26 to Thursday, February 3. |

SECOND TERM—1921

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| Registration, second term begins | Monday, January 31. |
| Instruction begins | Monday, February 7. |
| Registration, second term ends | Thursday, February 17. |
| Recess (Washington's Birthday) | Tuesday, February 22. |
| Spring recess | Thursday, March 24, through Wednesday, March 30. |
| Mid-term reports | Wednesday, April 9. |
| Recess (Memorial Day) | Monday, May 30. |
| Term examinations | Thursday, June 2 to Friday, June 10. |
| Commencement exercises | Saturday to Wednesday, June 11-15. |
| Commencement day | Wednesday, June 15. |

OFFICERS OF DIVISION OF EXTENSION TEACHING 1920-1921

RUSH RHEES, D.D., LL.D.
President

LOUIS AUGUSTUS PECHSTEIN, PH.D.
Director of Extension Division

CHARLES HOEING, PH.D.
Dean of College for Men

ANNETTE GARDNER MUNRO, A.M.
Dean of College for Women

RAYMOND N. BALL
Executive Secretary

The Faculty

RUSH RHEES, A.M., DD., LL.D., - - 440 University Avenue
PRESIDENT AND BURBANK PROFESSOR OF BIBLICAL
LITERATURE.

GEORGE MATHER FORBES, A.M., LL.D., - 243 Alexander Street
PROFESSOR OF PHILOSOPHY AND EDUCATION

ARTHUR SULLIVAN GALE, PH.D., - - 18 Thayer Street
FAYERWEATHER PROFESSOR OF MATHEMATICS

JOHN ROTHWELL SLATER, PH.D., - - 21 Thayer Street
DEANE PROFESSOR OF RHETORIC AND ENGLISH
LITERATURE

VICTOR JOHN CHAMBERS, PH.D., - - - Clover Street,
PROFESSOR OF CHEMISTRY Brighton, N. Y.

CHARLES HOEING, PH.D., - - - 6 Portsmouth Terrace
TREVOR PROFESSOR OF LATIN AND DEAN OF THE
COLLEGE FOR MEN

- WILLIAM DAYTON MERRELL, PH.D., - *Brighton Station, R. D.*
 PROFESSOR OF BIOLOGY
- EDWIN FAUVER, A.B., M.D., - - - - - *46 Vick Park B*
 PROFESSOR OF HYGIENE AND PHYSICAL EDUCATION
- JOHN RAYMOND MURLIN, A.M., PH.D., D.S.C., - *Landing Road,*
Brighton, N. Y.
 PROFESSOR OF PHYSIOLOGY AND DIRECTOR OF THE
 DEPARTMENT OF VITAL ECONOMICS
- CHARLES WILLIAM WATKEYS, A.M., - *20 Girton Place*
 PROFESSOR OF MATHEMATICS
- RAYMOND DEXTER HAVENS, PH.D., *141 North Union Street*
 ROSWELL S. BURROWS PROFESSOR OF ENGLISH
- LAURENCE BRADFORD PACKARD, A.B., - *Kendrick Hall*
 PROFESSOR OF HISTORY
- LOUIS AUGUSTUS PECHSTEIN, PH.D., - *38 Harper Street*
 PROFESSOR OF PSYCHOLOGY AND EDUCATION
- DEXTER PERKINS, PH.D., - - - - *478 Alexander Street*
 PROFESSOR OF HISTORY
- ROBERT ARGYLL CAMPBELL, A.B., - *306 Meigs Street*
 ACTING PROFESSOR OF ECONOMICS
- GEORGE HALCOTT CHADWICK, M.S., - *891 Harvard Street*
 ASSISTANT PROFESSOR OF GEOLOGY
- CHARLES CARRON, B.L., - - - - *59 Oxford Street*
 ASSISTANT PROFESSOR OF FRENCH
- FLOYD COOPER FAIRBANKS, A.B., - *700 Post Avenue*
 ASSISTANT PROFESSOR OF PHYSICS
- THEODORE AUGUSTUS MILLER, A.M., - *18 Sibley Place*
 ASSISTANT PROFESSOR OF CLASSICS
- HENRY ALBRIGHT MATTILL, PH.D., - - *61 Selye Terrace*
 ASSISTANT PROFESSOR OF BIO-CHEMISTRY
- CARL LAMSON CARMER, A.M., - - - *20 Thayer Street*
 ASSISTANT PROFESSOR OF ENGLISH
- HARRY DUFFIELD CLOUGH, A.M., M.D., - *185 Park Avenue*
 ASSISTANT PROFESSOR OF DIAGNOSTIC PHYSIOLOGY
- WILLARD RIGGS LINE, M.S., - - - - *1 Rowley Street*
 ASSISTANT PROFESSOR OF CHEMISTRY

ASSISTANT PROFESSOR OF CHEMISTRY

- DONALD BEAN GILCHRIST, A.B., B.L.S., - *460 Harvard Street*
 LIBRARIAN

 ASSISTANT PROFESSOR OF PSYCHOLOGY AND EDUCATION

 JONATHAN FRENCH SCOTT, PH.D., - 902 *Harvard Street*

ACTING ASSISTANT PROFESSOR OF HISTORY

 GEORGE CHESTER CURTISS, A.M., - 141 *North Union Street*

ACTING ASSISTANT PROFESSOR OF ENGLISH

 EARL CLARENCE KARKER, B.S., - 151 *Genesee Street*

INSTRUCTOR IN PHYSICS

 WILLIAM CLARK TROW, A.M., - 357 *University Avenue*

INSTRUCTOR IN PSYCHOLOGY AND EDUCATION

 WALTER CAMPBELL, B.P.H.E., - - 92 *Prince Street*

INSTRUCTOR IN PHYSICAL EDUCATION

 FRANK VON DER LANCKEN - - - 102 *Aberdeen Street*

LECTURER ON THE HISTORY OF ART

 GEORGE BARLOW PENNY, B.S., - - 278 *Alexander Street*

LECTURER ON THE APPRECIATION OF MUSIC

 WILLIAM BETZ, A.M., - - - - 160 *Grand Avenue*

EDUCATION AND PSYCHOLOGY

 BELLE D. BOYSON, PH.B., - - - *Social Welfare League*

SOCIAL WORK

THE AIM OF THE EXTENSION TEACHING IN THE UNIVERSITY OF ROCHESTER

Every community contains numbers of men and women who wish to pursue serious study, but must do it, if at all, after ordinary business hours.

To meet the demand for such study, the Board of Education, Mechanics Institute and other private organizations conduct evening classes of elementary or high-school grade.

To the University falls the obligation and privilege to meet the demand for college studies, so far as its resources will permit.

The subjects offered in this Announcement are identical with courses given students in regular attendance at the University; they are offered by the regular University faculty; they require an equivalent period of instruction and carry full University credit.

The object in these courses is three-fold: To offer work of cultural type to interested groups; to give such technical and business training as properly falls within the field of the University; to offer professional training to public school teachers, social workers, medical groups, etc.

Students enrolled in the Division of Extension Teaching, while not required, are nevertheless encouraged to work for a regular degree granted by the University.

The University seeks to offer the people of Rochester the same opportunities for college training given the students in regular attendance.

ADMISSION

No examination is required for admission to courses offered in the Division of Extension Teaching. All courses are open without restriction, unless it is otherwise stated, to both men and women. Students will be classified as regular or special students.

REGULAR STUDENTS

Regular students are those who satisfy the regular entrance requirements of the University and are hereby recognized as candidates for graduation. For detailed information regarding admission see pp. 48 sq. in the 1919-1920 Annual Catalogue of the University, a copy being furnished upon request.

Men students seeking regular admittance will make application to the Dean of College for Men, women students to the Dean of College for Women. Upon satisfying the entrance requirements, the applicant will be issued a *certificate of matriculation* for presentation to the Director of the Division of Extension Teaching.

SPECIAL STUDENTS

All students not admitted by their respective deans as regular students are classified as special students by the Director upon enrollment. A student entering as a special may transfer subsequently to the regular classification by satisfying the entrance requirements.

ACADEMIC CREDIT

In general, all courses offered in extension teaching are regular university courses and are awarded full college credit. Credit will be given for the number of hours officially published with the course, and for no more.

With the consent of their respective Deans, men and women students already matriculated in the University may register for courses offered in the Division of Extension Teaching.

UNIT OF INSTRUCTION

The unit of instruction is one hour a week for one term. Three-hour courses are divided between Tuesday and Thursday evenings, one-hour courses being scheduled to follow these. Specialized professional courses for public school teachers are provided for Saturday morning.

GRADES

The scale of marks for recording grades is as follows:

I, 90-100%; II, 85-89%; III, 80-84%; IV, 70-79%; V, 60-69%, passed but inferior; VI, 40-59%, ordinary failure; VII, 0-39%, hopeless failure.

Grades will be mailed at the close of each term, provided the student furnishes the University Recorder with a stamped and addressed envelope for this purpose.

GRADUATION

Regulations controlling the award of the B.A., B.S., and M.A. degrees will be found on pp. 67 sq. of the 1919-1920 Annual Catalogue of the University. Students working for a degree will consult their respective deans regarding their course requirements. Certain courses of an advanced character, upon the approval of the Dean of College for Men, may be received as credit toward the Master's degree.

ADVANCED STANDING

Regularly enrolled students will, upon petition, be credited by their respective deans with work done at other colleges, provided an official record is presented.

GRADUATES OF NORMAL SCHOOLS

Graduates of recognized state normal schools, who have taken the full two years normal course based upon four full years of high school work, may receive a year's college credit for their professional work and additional credit for all college work of a cultural, non-professional type. Such graduates of normal schools are encouraged to seek the degree Bachelor of Science in Education, for which purpose the student's dean and the head of the Department of Education will arrange a program planned to further the specific cultural and professional needs of the individual applicant.

REGISTRATION

Students who expect to attend courses in the Division of Extension Teaching are required to register in person at the office of the Director, Catharine Strong Hall, at the beginning of each term during the periods indicated in the calendar (p. 2).

Fees must be paid at the time of registration and a ticket of admission to each course secured for presentation to the instructor.

Prospective students will be permitted to attend one class meeting of a course before registration and payment of fees. Instructors are required to exclude a student not presenting a class admission ticket no later than the student's second attendance upon the classroom.

Changes in registration will be made exclusively in the office of the Director.

FEES ¹

Each student pays a registration fee of \$1.00 for each term. Matriculated students in the College are not required to pay this fee.

The tuition fee varies with the several courses as announced in the description of the courses. In general, a one-hour credit course carries a \$6.00 fee each term, each additional hour of credit entailing a \$5.00 fee per hour.

Science courses carry a laboratory fee.

An additional fee of \$1.00 is required for late registration.

No tuition fees are refunded except by direction of the Director.

Fees are payable in the office of the Director upon registration, checks being made payable to the University of

¹ Attention is called to the fact that tuition fees are for a period of sixteen weeks of instruction, as contrasted with a ten-weeks period in previous years, making the present fees markedly lower than previously.

Rochester. No instructor is authorized to receive student fees.

THE LIBRARY

The Library, located in Sibley Hall, contains nearly 80,000 volumes, including a circulating musical library of about 6,000. The Library is open from 8 A. M. to 10 P. M. daily throughout the academic year, and from 9 A. M. to 5 P. M. during vacations, except on Sundays and on legal holidays that are observed by the college.

THE ART GALLERY

The Memorial Art Gallery, containing a fine collection of pictures, the Art Library, a print collection, etc., is open to all students of the University, a student ticket being presented to admit them at all times that the Gallery is open for exhibition.

THE SCIENCE LABORATORIES

The Eastman Laboratories for Biology, Physics and Physiology, the Geology Laboratory in Sibley Hall, Reynolds Laboratory for chemistry, and the Psychological Laboratory in Anderson Hall offer full privileges to students in the Division of Extension Teaching.

OFFICE OF EXTENSION TEACHING

The office of the Division of Extension Teaching is located in Catharine Strong Hall, corner of University Avenue and Prince Street.

The office will be open *during the period of registration* from 4:30 to 6 in the afternoon and 7-8 in the evening (Saturday, 9 A. M. to 1 P. M.) during the first week of registration each term and from 7-9:30 each Tuesday and Thursday evening during the first two weeks of instruction.

COURSES OF INSTRUCTION 1920-1921

Courses not listed in this Announcement may be given upon the request of any responsible individual or group willing to organize a sufficiently large class to insure the success of the undertaking. Provided satisfactory arrangements can be made, specially organized classes may be taught at the time and place selected by a petitioning group.

A minimum registration of fifteen students is required in a course before a class will be formed, except as special exception may be made. The University reserves the right to limit the registration in any course when the interest of the work seems to require it.

The time of meeting is stated with the description of each course. An effort will be made to arrange minor conflicts.

THE DEPARTMENTS OF INSTRUCTION

NOTE: *Roman numerals indicate the several terms of the college year.*

Courses marked with an asterisk may be selected only with the consent of the instructor.

E indicates that the course is offered only in the Extension Division.

A denotes Anderson Hall; E, Eastman; St., Strong.

BIBLIOGRAPHY

Librarian GILCHRIST

I Practical Use of Reference Books. A general study of books of reference and bibliographical aids, including work with special indexes, general, trade, and national bibliographies, year books, and biographical dictionaries as well as bibliographical guides in the various fields of learning. Planned particularly to prepare the student to collect material for the papers and theses required in the last two years of college, or to investigate subjects outside the curriculum. Lectures, recitations, and problems.

II. One hour a week; credit one hour; fee \$6.00; 8:20-9:10 p. m. Tuesday; St. 18.

BIOLOGY

Professor MERRELL

1 General Biology. The biology of the cell and a study of representative forms from the larger groups of animals and plants with reference to their structure, physiology, development, relationships, evolution, adaptations, and economic importance. The lectures treat of current biological theories, especially those relating to organic evolution, including the theories of Lamarck, Darwin, Weismann, Mendel, and De Vries.

Professor Merrell and _____

- I. II. Two laboratory periods and one lecture a week; credit six hours; fee \$6.00 laboratory, \$16.00 tuition each term; 7-9 p. m. T.-Th.; E 32.

CHEMISTRY

Professor CHAMBERS, Assistant Professor LINE, Mr. SMITH and assistants

The usual \$18.00 laboratory fee in courses 1, 2 and 4, \$15.00 in course 3, and a breakage deposit of \$5.00 will be charged each semester in addition to the tuition fees given below.

The laboratories will be open Tuesday and Thursday evenings from 7:00-10:00 p. m. and Saturday afternoon from 1:00-6:00 p. m. Hours selected for laboratory work must be approved by the instructor in the course.

1 General Chemistry. A careful study of the fundamental principles of chemical science and their practical application to the problems of daily life. The aim of this course is to give the person taking it a better understanding of the things and processes with which he works. It also gives a good preparation for the more special courses in chemistry following. Those not desiring the training that comes from the laboratory work may register for the lectures only.

Professor Chambers and Assistant Professor Line.

- I. II. Credit eight hours; fee \$21.00 each term; 7-8 p. m. T.-Th. and six selected laboratory hours; Reynolds Laboratory.

2 Qualitative Analysis. A study of the chemical properties of the common ions and the application of these to the separation and identification of the ions when present in unknown mixtures. Chemistry 1 or equivalent prerequisite.

Assistant Professor Line.

- I. II. Credit eight hours; fee \$21.00 each term; 7-8 p. m. T.-Th. and six selected laboratory hours; Reynolds Laboratory.

3 Quantitative Analysis. A general course covering the typical methods used for the determination of the common metallic and non-metallic elements and their important radicles. Wherever possible the substances analyzed are actual commercial products. Chemistry 2 or equivalent prerequisite.

Assistant Professor Line.

I. II. Credit eight hours; fee \$21.00 each term; 8-9:30 p. m. T.-Th. and six selected laboratory hours; Reynolds Laboratory.

4 Organic Chemistry. A general course devoted to the study of the properties, relationships, synthesis, structure, and uses of the most important classes of organic compounds. Persons with the proper laboratory experience in organic chemistry may omit the laboratory work.

Professor Chambers.

I. II. Credit ten hours; fee \$26.00 each term; 8-9:30 p. m. T.-Th. and six selected laboratory hours.

ECONOMICS AND SOCIOLOGY

Acting Professor CAMPBELL

1 Principles of Economics. A study of the fundamental laws governing the production and distribution of wealth. These principles are traced in the workings of factories, banks, railroads, labor unions, corporations, and other important economic organizations.

Professor Campbell.

I. II. Three hours a week; credit six hours; fee \$16.00 each term; 7-8:15 p. m. T.-Th.; A 24.

ENGLISH

COURSES IN RHETORIC AND PUBLIC SPEAKING.

Professors SLATER and HAVENS, Assistant Professors CURTISS and CARMER, Mr. —————

1 Freshman Rhetoric. Practice in written and oral composition. Expository, argumentative, descriptive, and narrative writing and speaking are taken up in the order named.

Assistant Professor Curtiss.

I. II. Three hours a week; credit six hours; fee \$16.00 each term; 7-8:15 p. m. T.-Th.; A 28.

4a, 4b The College Forum. Formal and informal public speaking upon topics of college interest and upon current events.

The class will be organized as a deliberative body. At each meeting there will be heard both speakers previously appointed to prepare assigned subjects and volunteers speaking extemporaneously in discussion of the topic under consideration. Instruction in the preparation and delivery of speeches and constructive criticisms by the instructor.

Mr. _____.

- I. II. Three hours a week; credit three hours each term; fee \$16.00 each term; 7-8:15 p. m. T-Th.; A 13.

COURSES IN ENGLISH LITERATURE

4 Shakespere. A careful study of several tragedies, and more rapid reading of the leading comedies and histories. This course is recommended to all juniors and seniors as the most important English elective.

Professor Slater.

- I. Two hours a week; credit two hours; fee \$11.00; 7-9 p. m. Thursday; A 16.

9. Victorian Poets. Tennyson, Arnold, Browning, Rosetti, Morris, Swinburne.

Professor Slater.

- II. Two hours a week; credit two hours; fee \$11.00; 7-9 p. m. Thursday; A 16.

10 The English Drama. A study in the first term of English drama from its beginning down to the nineteenth century; in the second term of contemporary English and American drama.

Assistant Professor Carmer.

- I. II. Three hours a week; credit six hours; fee \$16.00 each term; 7-8:15 p. m.; T-Th.; St. 22.

12 American Literature. The prose and poetry of the more important American writers and the ideals and character of the American people as therein expressed.

Professor Havens.

- II. Three hours a week; credit three hours; fee \$16.00; 7-8:15 p. m.; T-Th.; A 15.

GEOLOGY

Assistant Professor CHADWICK

1E Interpretative Geology of New York State. About twenty specific areas of New York, such as the Adirondacks, the Genesee

Valley, Long Island, considered each in its geologic setting and its human settlement; the determining effect of earth structure on local history.

Assistant Professor Chadwick.

- I. One hour a week; credit one hour; fee \$6.00; 8:20-9:10 p. m. Tuesday; St. 18.

HISTORY OF ART

Mr. VON DER LANCKEN

1E Art Appreciation. A survey in its principal manifestations of ancient, mediæval, renaissance and modern art. Lectures, critical discussion, description of methods, occasional technical and lantern-slide demonstrations.

Mr. Von der Lancken.

- I. II. One hour a week; credit two hours; fee \$6.00 each term; 8:20-9:10 p. m. Thursday; St. 17 and Art Gallery.

2 Italian Art. Painting, sculpture, and architecture of the mediæval, renaissance, and modern periods.

(1) The Florentine, Sienese, and Umbrian schools, including Raphael and Michelangelo.

(2) Leonardo da Vinci, Correggio, and the North Italian and Venetian schools. Modern Italian art.

This course consists of lectures, critical discussion, and a description of methods; when materials are available, technical and lantern-slide demonstrations will be given.

Mr. Von der Lancken.

- I. II. Three hours a week; credit six hours; fee \$16.00 each term; 7:00-8:15 p. m. T-Th.; St. 17 and Art Gallery.

HISTORY AND GOVERNMENT

Professors PACKARD, PERKINS, and Assistant Professor SCOTT

COURSES IN HISTORY

1 Introduction to the History of Western Europe. A survey of European civilization as it has evolved from the civilization of Rome to that of the present day, with considerable attention to historical and contemporary political geography. The work consists of lectures, prescribed reading in various books, and a weekly written test.

Professor Packard, Assistant Professor Scott.

- I. II. Three hours a week; credit six hours; fee \$16.00 each term; 7-8:15 p. m. T-Th.; St. 8.

1E Current International Problems. A brief study of the origin and meaning of those elements in international relations which are most important at the present time. Consideration will be given to such questions as the situation in Ireland, in Poland, in Mexico, the Near East and the Far East.

Professor Packard.

- I. II. Two hours a week; credit two hours; fee \$6.00 each term;
8:20-9:10 p. m. Th.; St. 18.

COURSES IN GOVERNMENT

1 American Government and Governmental Problems. A study of the frame-work of American government, national, state, and local. Attention is also given to parties, their organization and working, and to the most important contemporary political problems. The work consists of lectures, prescribed readings, written tests, and individual reports.

Professor Perkins.

- I. II. Three hours a week; credit six hours; fee \$16.00 each term;
7-8:15 p. m. T-Th.; St. 18.

LATIN

Professor HOEING and Assistant Professor MILLER

NOTE.—Courses 1 and 2 are prerequisite to other work in the department.

1 A Survey of Latin Literature. Text: Peck and Arrow-smith, "Roman Life in Latin Prose and Verse." Terence and Plautus: One play will be read in class and one play outside.

Assistant Professor Miller.

- I. Three hours a week; credit three hours; fee \$16.00; 7-8:15 p. m.
T-Th.; A 14.

2 Horace and Catullus. A study of Roman lyric poetry.

Professor Hoeing.

- II. Three hours a week; credit three hours; fee \$16.00; 7-8:15 p. m.
T-Th.; A 14.

7 Roman Elegy. Selections from the elegiac poets, particularly Tibullus and Propertius. Especial attention will be given to the form and content of elegy among the Romans and their Greek models.

Professor Hoeing.

- I. Three hours a week; credit three hours; fee \$16.00; 7-8:15 p. m.
T-Th.; A 30.

MATHEMATICS

Professor GALE, Professor WATKEYS

NOTE.—A comprehensive examination is held in June in each course extending through the year.

1 Elementary Functions. The work of the year consists of a study of the elementary functions, algebraic and transcendental, with emphasis on their applications to various fields of knowledge. It includes plane trigonometry and topics from solid geometry, advanced algebra, analytic geometry, and calculus. Intermediate algebra prerequisite.

Professor Watkeys

- I. II. Three hours a week; credit six hours; fee \$16.00 each term;
7-8:15 p. m. T-Th.; A 41.

2 Analytic Geometry and Calculus. This course presents those ideas of these subjects which are indispensable for further mathematical study. This work is not only fundamental in the application of mathematics to physics but it is being increasingly applied in other subjects, for example, in economics and chemistry. Mathematics 1 prerequisite.

Professor Gale.

- I. II. Three hours a week; credit six hours; fee \$16.00 each term;
7-8:15 p. m. T-Th.; A 38.

APPRECIATION OF MUSIC

Mr. PENNY

1E Appreciation of Music. A condensed course especially adapted to students who consider music an important part of their general culture.

- I. II. One hour a week; credit two hours; fee \$6.00 each term;
4:30-5:30 p. m. Wednesday; Institute of Musical Art.

PHILOSOPHY

Professor FORBES

2 Ethics. A study of the fundamental aspects of the moral consciousness, including the moral judgment, moral law, the moral standard, moral progress, moral responsibility, group morality, and the practical principles of conduct. The material is presented in the form of specific problems and is then worked over into systematic form by coöperative effort.

Professor Forbes.

- I. II. One hour a week; credit two hours; fee \$6.00 each term; 8:20-9:10 p. m. Tuesday; St. 18.

HYGIENE AND PHYSICAL EDUCATION

Professor FAUVER and Mr. CAMPBELL

1E Recreational Leadership. This course is intended to train persons engaged in recreational work with groups of young people in the public schools, factories, settlements and public playgrounds. It deals with the underlying theory and purposes of recreational leadership; methods of organization; practice in the activities of various groups; typical exercises, plays and games; etc.

Professor Fauver and Mr. Campbell.

- II. Two hours a week; credit two hours; fee \$11.00; hours and place to be announced.

PHYSICS

Assistant Professor FAIRBANKS and Mr. KARKER

1 General Course. The course covers the elementary phenomena of physics, having in mind both liberal culture and preparation for advanced study in physics and in engineering. The work is based on the training and knowledge afforded by the high school study of physics. Mathematics 1 prerequisite.

Assistant Professor Fairbanks and Mr. Karker.

- I. II. Two laboratory periods and one lecture a week; credit six hours; fee \$6.00 laboratory, \$16.00 tuition each term; 7-9 p. m. T-Th.; E 13.

PHYSIOLOGY

Professor MURLIN, Assistant Professor MATTILL, Assistant Professor CLOUGH

1E Biochemistry of the Blood. A course designed for physicians and others having the necessary preparation and consisting of laboratory instruction and practice in the quantitative analysis of the blood. The methods of determining its non-protein constituents (urea, creatinine, uric acid, sugar, fat, calcium, etc.) are applied to normal and pathological material; and the physiological and clinical significance of this type of information is discussed informally. Since the methods are almost entirely colorimetric or nephelometric, requiring daylight, the times of meeting will be determined by the majority of those registering.

Professor Mattill.

- I. One three hour period per week; credit three hours; fee laboratory \$4.00, tuition \$16.00; E 35.

2E Diagnostic Physiology of the Heart. This course of informal talks and laboratory demonstrations is designed for physicians and will consist chiefly of a study of the normal and the abnormal physiology of the heart as shown by the electrocardiograph. During the course such subjects as the following will be considered: the field of electrocardiography; construction of the electrocardiograph; methods of obtaining tracings; analysis of electrocardiograms of cases of cardiac arrhythmia obtained from animal experimentation and from human cases.

The meetings will be held weekly during the second semester, from February until June, from four until six o'clock in the afternoon. Each meeting will consist of an informal talk for three-quarters of an hour followed by a demonstration lasting an hour and a quarter.

Professor Clough.

II. One two hour period per week; credit two hours; fee \$11.00; E 30.

3E Physiology of Nutrition. A lecture and demonstration course designed for physicians, or physicians' assistants, and nurses who have had the necessary preliminary training. Subjects included will be the principles of colorimetry, the digestion, absorption, and metabolism of the several food stuffs, vitamins and their functions, mineral metabolism, the construction of dietaries, etc.

Professor Murlin.

II. One two hour period per week; credit two hours; fee \$11.00; E. 34.

Definite-announcement of time for above courses will be made by the Department.

PSYCHOLOGY AND EDUCATION

PROFESSOR PECHSTEIN, Mr. TROW, Mr. BETZ, Mr. _____

1a Introductory Psychology. This course deals with the fundamental presuppositions of psychology, and comes to focus discussion upon the processes of knowing, feeling, and action.

Mr. _____.

I. Three hours a week; credit three hours; fee \$16.00; 7-8:15 p. m.
T-Th.; St. 9.

1b Applied Psychology. Emphasis is made upon the application of psychological principles to education, religion, art, industry, advertising, law, medicine, mental testing, personnel, and morale in general.

Mr. _____.

II. Three hours a week; credit three hours; fee \$16.00; 7-8:15 p. m.
T-Th.; St. 9.

4a Historical Development of Educational Problems in the United States. An historical survey of the development of educational theory and practice, with major emphasis upon the functional aspects and the specific needs of the teacher. The modern period and current educational practice receive chief consideration.

Mr. Trow.

- I. Three hours a week; credit three hours; fee \$16.00; 7-8:15 p. m.
T-Th.; St. 7.

4b High School Teaching. This course stresses the methods of teaching in high schools, together with problems of the curriculum, the psychology of high school subjects, etc.

Mr. Trow.

- II. Three hours a week; credit three hours; fee \$16.00; 7-8:15 p. m.
T-Th.; St. 7.

1E Psychology and Principles of Number. A survey of the historical development of the number processes regularly taught in the grades; the psychological processes involved in number operations; methods of number instruction, with special reference to the arithmetic course of study in the Rochester City Schools. Lectures, reports, demonstration lessons.

Mr. Betz.

- I. Two hours a week; credit two hours; fee \$11.00; 10 a. m.-12 m.
Saturday; St. 8.

2E Mathematics in Secondary Schools. The problems and present status of the teaching of mathematics in the Junior and Senior High Schools, emphasizing both the content of typical secondary school courses and the method of teaching, with special reference to the mathematics in the Rochester High Schools.

Mr. Betz.

- II. Two hours a week; credit two hours; fee \$11.00; 10 a. m.-12 m.
Saturday; St. 8.

3E Psychology of Elementary-School Subjects. A course for elementary school teachers, in which a detailed study is made of the methods by which children learn to write, draw, read, spell, and grasp the meaning of history, geography, mathematics, and the sciences.

Mr. _____

- I. Two hours a week; credit two hours; fee \$11.00; 10 a. m.-12 m.
Saturday; St. 9.

4E Methods of Teaching in Elementary Schools. This course is for actual and prospective teachers in the kindergarten and elementary school, and bases its discussion of types of teaching upon

the psychological implications developed in 3E. Lectures, reports, readings, demonstration teaching.

- Mr. _____
 II. Two hours a week; credit two hours; fee \$11.00; 10 a. m.-12 m.
 Saturday; St. 9.

5E School Administration. The problems of efficient school administration, specific obligations of the several agencies involved (school board, superintendent, principals, teachers, etc.), types and administrative methods of selected schools systems, etc. will receive consideration. Lectures, discussions, written and oral reports.

- Professor Pechstein.
 I. Two hours a week; credit three hours; fee \$16.00; 10 a. m.-12 m.
 Saturday; St. 21.

6E Supervision of Instruction. The need and underlying principles of school supervision, supervisory devices and the technique of supervision will receive major discussion. Lectures, discussions, written and oral reports.

- Professor Pechstein.
 II. Two hours a week; credit three hours; fee \$16.00; 10 a. m.-12 m.
 Saturday; St. 21.

7E Research Problems in Education. A weekly round table for the report and free discussion of research in progress. Open to students carrying on research and other mature school officers. Required of candidates for the master's degree.

- Professor Pechstein.
 I. II. One hours a week; credit two hours; fee \$6.00 each term;
 9-10 a. m. Saturday; St. 21.

8E The Atypical Child. This course deals with the psychology, testing and treatment of those children who deviate from the normal. The feeble-minded, neurotic, psychopathic and epileptic, and also the exceptionally gifted will be considered.

- Mr. Trow.
 I. II. One hour a week; credit two hours; fee \$6.00 each term;
 9-10 a. m. Saturday; St. 18.

NOTE: Courses 1a, 1b, 4a and 4b are required for the college graduate professional teaching certificate; 1E and 2E are specially presented for teachers of mathematics in the elementary and high schools; 3E and 4E are for elementary school teachers not restricted to the field of mathematics; 5E and 6E are provided for active and prospective school superintendents, principals and supervisors, as well as 7E; 8E is for teachers of special classes and others interested in the problem of abnormality in our schools.

RELIGION

Assistant Professor MILLER

3 The Genesis and Evolution of Religion. A study of the origin and growth of the religious spirit from its most primitive beginnings. The later part of the course will involve a comparative study in outline of the great religions of the world, with the object of comparing these with Christianity in order to discover what common elements Christianity has with other religions, and to demonstrate on a basis of observed facts its superiority over all others.

Assistant Professor Miller.

- II. Three hours a week; credit three hours; fee \$16.00; 7-8.15 p. m. T-Th.; A 30.

ROMANCE LANGUAGES

FRENCH

Assistant Professor CARRON

1 Elementary French. Grammar: easy readings in French prose; practice in speaking and writing simple French.

Assistant Professor Carron.

- I. II. Three hours a week; credit six hours; fee \$16.00 each term; 7-8:15 p. m. T-Th.; St. 21.

2 Intermediate French. Translation and reading at sight of French prose and poetry. Further study of written and spoken French. A general survey of French Literature.

Assistant Professor Carron.

- I. II. Three hours a week; credit six hours; fee \$16.00 each term; 4:20-6 p. m. W-F; St. 21.

5 Advanced Composition and Conversation. Careful drill in pronunciation. Exercises in dictation. Constant practice in speaking and writing French. The course is conducted wholly in French. French 5 should follow, or be taken in conjunction with, French 3 or 4.

Assistant Professor Carron.

- I. II. Two hours a week; credit four hours; fee \$11.00 each term; 4:20-6 p. m. Monday; St. 21.

SOCIAL WORK

MISS LAIRD, MISS BOYSON, MRS. CLOUDMAN, MISS BUNCE

1E Family and Community Standards for Workers in the Public Health Field. This Course is open only to registered nurses. It extends over a four months' period—October to February—and is repeated during the second semester. Five hours a week and field work. The subject matter is divided into four correlated sections.

- (a)—Theoretical work, dealing with the principles of Public Health Nursing.

Miss Mary Laird, R. N.

- (b)—Practical work and instruction in the technique of Public Health Nursing.

Mrs. Myra Cloudman, R. N.

- (c)—Theory and Practice in Nutrition.

Miss Edna Bunce, B. S.

- (d)—Principles of Family Case Work.

Miss Belle D. Boyson, Ph. B.

I and II. Time and place to be given special announcement; fee \$15.00 per term.

2E Intensive Course in Social Work. This Course extends throughout the year; five hours a week with field work; open to persons desiring a minimum training for professional social work. By special arrangement under-graduate students of the University of Rochester, who are pursuing or have completed courses in Sociology, will be admitted. The subject matter is divided as follows:

First Division.—The Essentials for Normal Life from Infancy to Old Age.

Second Division.—Deviations from the Normal, physical, mental and social, with Community Facilities for Meeting the Problems Involved.

Third Division.—Theory and Technique of Family Case Work—interviewing, investigation, use of evidence, social diagnosis and plans for treatment. Field work and round-table discussions.

Miss Belle D. Boyson.

I. II. Time and place to be given special announcement; fee \$25 for the year.

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